

Original Research Report

A Study of Teenagers' Awareness of Healthy Eating Patterns as a Precursor to Healthy Adulthood

Cecilia A. Olarewaju¹, Monsurat Bello^{1*}, Rachael F. Gbadebo¹

¹Department of Home Economics, PMB 520, Adeyemi College of Education, Ondo, Nigeria.

***Correspondence:** Monsurat Bello, Department of Home Economics, Adeyemi College of Education, Ondo, Nigeria (Email: bellomonsurat01@gmail.com).

Abstract: The study investigated teenagers' awareness of healthy eating patterns as a precursor to healthy adulthood in Ondo West Local Government Area of Ondo State, Nigeria, by employing a survey research design. A total of two hundred and twenty (220) respondents participated in this research. A self-developed questionnaire consisting of fifty items was used for the purpose of collecting data. Data were analyzed using mean scores, standard deviation, and t-tests. The respondents agreed that eating three times daily, taking fruits once daily, and consumption of soft drinks daily and part of the eating patterns of teenagers. They also agreed that every single food must be nutritionally balanced, that excessive consumption of fat can lead to weight gain and obesity, and chronic diseases, and that carbohydrates provide the major source of energy intake, showing they have a good level of awareness of healthy eating patterns. The respondents agreed that the high rate of sugar consumption leads to obesity, that regular intake of fruits and vegetables prevents old age diseases and high intake of soft drinks leads to a higher risk of heart diseases as part of indices of the effects of unhealthy eating pattern on their adulthood. They also agreed that the interest of teenagers in foods that are in vogue, parents' financial capability, and parents' policies determine teenagers' eating habits. Based on the findings, it was recommended that parents should pay more attention to teenagers' eating patterns by ensuring that they consume nutritionally balanced meals.

Keywords: Adulthood, Consumption, Dietary habits, Healthy eating, Teenagers

1. Introduction

Teenage is a transitory phase from childhood to adulthood exhibiting rapid changes in physical growth, psychosocial development, and behavioral modifications. Several patterns including eating behaviors adopted during this age may continue throughout the life of most individuals (Nelson et al., 2008; Türkmen et al., 2017). Energy and nutrient requirements are high in young adults due to rapid physical growth as well as pubertal and cognitive development. Inadequate macro and micro-nutrient intake, unhealthy eating pattern, peer influence, and other unfavourable factors may cause young adults to be among the nutritionally vulnerable groups (Braun & Brewn, 2011; Dapi et al., 2011). Furthermore, lack of knowledge of healthy food choices in young adults and children may also lead to embracement of unhealthy food pattern, adversely affecting their health and nutritional status (Aksoydan & Cakir, 2011, Aktaş & Ozdogan, 2016). Healthy eating is not about strict limitations, staying unrealistically thin or depriving yourself of the food you love. Rather, it is about feeling great, having more energy, improving your health and boosting your mood. We all need a balance of protein, fat, carbohydrates, fiber, vitamins and minerals in our diets to sustain a healthy body including the youths. A teenager or teen is a person who falls within the ages of 13 to 19 years. The word ‘teenager’ is often associated with adolescence. However, the ages of 10 and 21 are considered to be adolescent and most neurologists consider the brain still developing into the early third decade (early 30’s). Hence, the nutritional intake which will enhance growth and development should be adequate.

Eating a balanced and varied diet and establishing healthy eating pattern promotes young people’s health, growth and intellectual development across the life course. Most notably, a healthy diet and body weight reduces the risk of ill health and premature death from non-communicable diseases (NCDs). A healthy diet can have a significant effect on many of adolescents’ main concerns by contributing to maintaining a healthy weight, improving physical and intellectual performance, optimizing growth and improving skin health. An unbalanced diet with reliance on energy-rich, nutrient-poor foods is an important factor in the current epidemic of obesity and NCDs. World Health Organization’s (WHO) guidance to Member States on healthy diets encourages everyone, particularly adolescents, to eat less food that is high in calories, fats, free sugars or salt/sodium, and more fruit, vegetables and dietary fibre, such as whole grains (WHO, 2022). Healthy eating pattern is an important gateway in demonstrating healthy nutrition practices. Optimum nutrition contributes to the development of general welfare and hence increases the quality of life (Gibney et al., 2009). Good nutrition is also associated with better management of diseases (Mwaruwa, 2016). Poor health literacy is an obstacle for individuals to understand and interpret nutritional information (Malloy-Weir & Cooper, 2017). Overcoming this obstacle is possible through nutrition literacy. Nutrition literacy is the ability to provide, understand and process nutrition information to make appropriate nutrition decisions (Zoellner et al., 2009).

Some diet-related behaviours are particularly important during adolescence. Regular eating of breakfast, for example, is thought to reduce snacking and consumption of energy-rich foods. It also increases intake of essential micronutrients, including iron, calcium and vitamins C, B and D, and fibre. Skipping breakfast remains very common among young people in Nigeria, and other unhealthy behaviours such as smoking, alcohol consumption and sedentary behaviours. Some food groups are hugely important during adolescence such include fruit and vegetable consumption during childhood is linked to many positive short- and long term health outcomes, with a well established decreased risk of NCDs such as cardiovascular disease, diabetes, obesity and cancer in adulthood. Most

countries recommend the consumption of five or more portions (> 400 g) of fruit and vegetables a day. Food preferences and eating pattern established in adolescence tend to be maintained into adulthood, which makes increasing fruit consumption among children and adolescents an important public health issue (Tunsi, 2019).

Adolescence offers opportunity window to ensure successful transition to adulthood. The nutritional status and eating behaviors acquired during this stage of life have important effects on the health and welfare of the adolescent as well as the intergenerational health outcomes (Rah et al, 2017). Promoting healthy eating behaviors in teenagers is important for correct growth and development, prevention of disease, prevention of overweight and obesity and creation of healthy eating patterns that can be maintained in adulthood (Massey-Stoke & Quezada, 2017). Meager Studies has been reported on nutrition literacy and dietary patterns among teenagers, therefore, the aim of this study is to determine the awareness of teenagers on healthy eating patterns as a precursor to healthy adulthood.

1.1. Statement of Problem

Healthy eating pattern become less common as young people move through adolescence, with the frequency of breakfast consumption, eating fruit and having evening meals with the family decreasing between the ages of 11 and 15. Snacks, junks food and soft-drink consumption increases with age, with significant differences between 11 and 15 year olds found in 23 countries and regions for boys and 16 for girls (Bohara et al., 2021; Rathi et al., 2017). This unhealthy eating habit such as not eating at the right time or eating right can result in their being overweight, having tooth decay, high blood pressure, ulcer, diabetes and some other health challenges among others. Evidence shows that few of the adolescents are aware of the importance of healthy eating, this is not far from the adolescent's misconception of what healthy eating is as revealed by other researchers which ranged from their preference for the consumption of high fat, high sugar and high salt foods which are linked to cardio-vascular disease, obesity and sodium hypertension (e.g. Food Standards Agency [FSA], 2004), which is in fact attributed to the contemporary environment which encourages indulgent consumption of energy-rich foods, the promotion of such foods by the media and commercial concerns, and their increasing centrality in a variety of social contexts. Adolescence is a period of development associated with striving for independence. One of the ways in which independence or rebellion may be expressed is through eating less healthy foods, or not eating as an act of parental defiance (Hill, Oliver, & Rogers, 1992; Stevenson et al., 2007). In addition, the school environment can influence adolescents eating behaviour directly though policies on the range and price of foods available, as well as indirectly through peer concerns and pressures in relation to food consumption and body image (Gregory, & Lawton, 2005). Hence, this study examined the awareness of teenagers on healthy eating patterns as a precursor to healthy adulthood.

1.2. Purpose of the Study

The major objective of this study was to investigate the awareness of teenagers on healthy eating patterns as a precursor to healthy adulthood. Specifically the study:

- (a) documented the eating pattern of teenagers in secondary schools in Ondo West Local Government Area.
- (b) highlighted the level of awareness on healthy eating pattern of teenagers in secondary schools in Ondo West Local Government Area.
- (c) examined the level of awareness of the effect of teenagers eating pattern on their adulthood.

- (d) Identified the factors responsible for the eating patterns of teenagers in secondary schools in Ondo West Local Government Area.

1.3. Research Questions

- (a) What are the eating patterns of teenagers in secondary schools in Ondo West Local Government Area?
- (b) Government Area?
- (c) What is the level of awareness on healthy eating pattern of teenagers in secondary schools in Ondo West Local Government Area?
- (d) What is the level of awareness of the effect of teenagers eating pattern on their adulthood?
- (e) What are the factors responsible for the eating patterns of teenagers in secondary schools in Ondo West Local Government Area?

Page | 151

1.4. Research Hypotheses

- (a) There is no significant difference between the eating pattern of teenagers in public and teenagers in private schools.
- (b) There is no significant difference between the eating pattern of male and female teenagers.

2. Materials and Methods

2.1. Design for the Study

This study adopted a descriptive research design. This design is used to describe characteristics of a population or phenomenon being studied, though it does not answer questions about how/when/why the characteristics occurred. Rather, it addresses the "what" question (what are the characteristics of the population or situation being studied?). The characteristics used to describe the situation or population is usually some kind of a categorical scheme also known as descriptive categories. The researchers consider this design as appropriate because it would allow the researchers to follow up with examinations of why the observations exist and what the implications of the findings are.

2.1.1. Ethics Approval of Research

The study was conducted without needing the approval of the National Health Research Ethics Committee of Nigeria (NHREC) because this study meets the criteria for exception. This research was conducted in established or commonly accepted educational settings, using survey procedures provided the information obtained is recorded in such a manner that human participants cannot be identified, directly or through identifiers linked to the participants (Federal Ministry of Health, 2007).

2.2. Area of the study

This study was carried out in Ondo West Local Government Area of Ondo State. Its headquarters are in the town of Ondo, Nigeria. Ondo West Local Government is one of the 18 Local Government Areas of Ondo State. It has an area of 970km² and a population of 283,672 (National Population Commission, 2006). This area has a multitude of her teenagers in secondary schools. The total number of secondary schools in Ondo West Local Government Area of Ondo is 45. These include 32 public secondary schools and 13 private secondary schools. Both male only and female only public schools are 3 each. 28 public schools are mixed while all the private schools are mixed (13). This makes the area viable for the study.

2.3. Population and Sample

The population for this study was all teenagers in both public and private secondary schools

in Ondo West Local Government Area of Ondo. Purposive sampling technique was used in selecting teenagers used for this study. This sampling technique is used first because the respondents are selected deliberately to be teenagers who can provide in-depth and detailed information about the phenomenon under investigation. Also, it is cost and time effective. Twenty-two (22) teenagers were randomly selected from ten (10) secondary schools comprising of six (6) public and four (4) private secondary schools in Ondo West Local Government Area of Ondo State, giving a total of 220 secondary school students.

2.4. Instrument for Data Collection and Study Procedure

A questionnaire, titled “*Questionnaire on the Awareness of Teenagers on Healthy Eating Patterns as a Precursor to Healthy Adulthood*” was used as the main instrument of data collection. The questions were structured to answer the research questions for this study. The questionnaire was drafted by the researchers and it consisted of five (5) sections (A, B, C, D and E). Section A consisted of the respondents’ personal data while, sections B, C, D and E were drawn to obtain information on the four (4) research questions raised in this study. The total number of items on the questionnaire is fifty (50). The questionnaire adopted the four Likert scales of Strongly Agree (SA, 4 points), Agree (A, 3 points), Disagree (D, 2 points) and Strongly Disagree (SD, 1 point). This is to allow the researchers to easily operationalize personality traits or perceptions. It was validated by three experts in food and nutrition in Department of Home Economics, Adeyemi College of Education, Ondo. The reliability index was estimated using Cronbach's Alpha and the value was 0.936. Two hundred and twenty copies of the questionnaire were produced and administered by the researchers with the help of two trained research assistant. The language of instruction was English language and the filled copies of the questionnaire were collected back immediately to avoid loss in transit.

2.5. Data Collection Technique

Two hundred and twenty copies of the questionnaires were produced and administered by the researchers with the help of two trained research assistants. The language of instruction was English; the respondents were guided on the areas that were not clear to them. All the administered copies were correctly filled and retrieved immediately to avoid loss in transit giving a return rate of 100%.

2.6. Data Analysis Technique

The response to the questionnaire items were collected and analyzed using frequency count, percentages, mean(X), standard deviation and t-tests. The mean of the questionnaire items were interpreted based on the statistical real limits. Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2 and Strongly Disagreed (SD) = 1. A cut-off point was obtained by adding up all the items. The formula for obtaining the cut-off is by totaling the nominal values and dividing by numbers of nominal values. That is

$$\text{C.O.P} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.50 \text{ ----- (1)}$$

Decision Rule: Any means of 2.50 and above are considered as agreed, while any below 2.50 were considered as disagreed. Also, for the hypotheses, if the p-value was less than or equal to 0.05, the null hypothesis was rejected; if the p-value was greater than 0.05, the null hypothesis was retained. The null hypotheses were tested using t-test statistics at the probability of 0.05 level of significance at relevant degree of freedom with the use of statistical Package for Social Sciences version, 20.

3. Results and Discussion

3.1. Research Question One: What are major factors responsible for insecurity in Nigeria?

Table 1: Mean and standard deviation of responses of the respondents on the eating patterns of teenagers in secondary schools

S/N	ITEMS	N= 220, C = 2.5		
		\bar{x}	S.D	Decision
1	I eat once daily	2.15	1.152	Disagreed
2	I eat two (2) times daily	2.05	1.062	Disagreed
3	I eat three (3) times daily	3.15	1.183	Agreed
4	I eat four (4) times daily	2.31	1.053	Disagreed
5	I eat five (5) times daily	2.25	1.021	Disagreed
6	I take fruits once daily	2.90	1.191	Agreed
7	I take fruits 2 times daily	1.17	1.019	Disagreed
8	I take fruits 3 times daily	1.87	0.982	Disagreed
9	I take fruits more than three (3) times daily	1.44	0.797	Disagreed
10	I skip breakfast	2.29	0.806	Disagreed
11	I skip elevenses	1.98	0.931	Disagreed
12	I skip lunch	2.23	0.953	Disagreed
13	I skip mid-afternoon meal	2.39	1.071	Disagreed
14	I skip super	2.44	1.025	Disagreed
15	I only eat breakfast on weekends	1.75	1.011	Disagreed
16	I consume soft drinks daily	3.29	1.004	Agreed
17	I eat snacks everyday	3.33	0.561	Agreed
18	I consume fried foods regularly	1.87	0.534	Disagreed
19	I take carbohydrate foods 3 times daily	2.13	1.019	Disagreed
20	I take carbohydrate foods 2 times daily	2.56	0.982	Agreed
21	I take carbohydrate foods once daily	2.78	0.797	Agreed
22	I take proteinous foods 3 times daily	2.11	1.019	Disagreed
23	I take proteinous foods 2 times daily	2.55	0.982	Agreed
24	I take proteinous foods once daily	2.67	0.797	Agreed

Key: N – total number of respondents, C - cut-off point, \bar{x} – mean response of all respondents, SD – Standard deviation

Table 1 revealed that the means responses of items 3, 6, 16, 17, 20, 21, 23 and 24 range from 2.55 – 3.33. This indicates that the respondents agreed with the items statements as part of the eating patterns of teenagers in secondary schools because their mean were above the cut-off point of 2.50. The mean responses of items 1, 2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19 and 22 range from 1.17 – 2.44 and this indicates that the respondents disagreed with the items statement as part of the eating patterns of teenagers in secondary schools because their mean were below the cut-off point of 2.50. The standard deviation of the responses ranges from 0.534 to 1.19 and was relatively low. This

indicates that the responses were clustered around the mean.

3.2. Research Question Two: What are major factors responsible of inflation in Nigeria?

Table 2: Mean and standard deviation of responses of the respondents on the level of awareness of healthy eating pattern of teenagers in secondary schools

S/N	ITEMS	N= 220, C = 2.5		
		\bar{x}	S.D	Decision
1	To follow a healthy eating pattern, every single food must be nutritionally balanced.	2.87	0.923	Agreed
2	Excessive consumption of fat can lead to weight gain and chronic diseases	2.61	0.927	Agreed
3	Carbohydrates provide the major source of energy intake	2.56	0.874	Agreed
4	Breakfast can be skipped when in a hurry	2.53	1.007	Agreed
5	Margarine has fewer calories than butter	2.58	1.014	Agreed
6	Proteins are not as easily and rapidly digested as carbohydrates and fat	2.71	0.989	Agreed
7	Protein is the primary source of muscular energy	2.51	1.019	Agreed
8	Carbonated beverages can negatively affect calcium metabolism	2.51	0.983	Agreed
9	Honey contains fewer calories than an equal amount of sugar	3.33	0.798	Agreed
10	All red meat is high in saturated fat	2.76	0.806	Agreed
11	Those with a meatless diet are at a higher risk of iron deficiency	2.55	0.931	Agreed
12	Methods of cooking used can affect the nutrients in food.	2.53	0.953	Agreed

Page | 154

Key: N – total number of respondents, C - cut-off point, \bar{x} – mean response of all respondents, SD – Standard deviation

Table 2 revealed that the means of responses of all items range from 2.51 – 3.33. This indicates that the respondents agreed with all the items statements as part of the level of awareness on healthy eating pattern of teenagers in secondary schools because their mean were above the cut-off point of 2.50. The standard deviation of the responses ranges from 0.798 to 1.019 and was relatively low. This indicates that the responses were clustered around the mean.

3.3. Research Question Three: What are the consequences of insecurity on the people of Enugu State?

Table 3: Mean and standard deviation of the responses of the respondents on the level of awareness of the effect of teenagers eating pattern on their adulthood

S/N	ITEMS	N= 220, C = 2.5		
		\bar{x}	SD	Decision
1	High rate of sugar consumption leads to diabetes	3.48	0.501	Agreed
2	Regular intake of fruits and vegetables prevent old age diseases	3.51	0.501	Agreed
3	High intake of soft drink leads to higher risk of heart disease	3.52	0.501	Agreed
4	Eating semi cooked or raw foods damage the immune system	3.47	0.501	Agreed
5	Consumption of sweetened food such as sweet causes decay of the teeth	3.55	0.499	Agreed
6	Consumption of excess calories and fat leads to obesity	3.48	0.501	Agreed

Key: N – total number of respondents, C - cut-off point, \bar{x} – mean response of all respondents, SD – Standard deviation

Table 3 revealed that the mean responses of all items ranged from 3.47 – 3.55. This indicates that the respondents agreed with all the items statements as part of the level of awareness of the effect of teenagers eating pattern on their adulthood because their mean were above the cut-off point of 2.50. The standard deviation of the responses ranges from 0.499 to 0.501 and was relatively low. This indicates that the responses were clustered around the mean.

Page | 155

3.4. *Research Question Four:* What are the consequences of inflation on the people of Enugu state?

Table 4: Mean and standard deviation of the responses of the respondents on the factors responsible for the eating patterns of teenagers in secondary schools

ITEMS		N= 220, C = 2.5		
		\bar{x}	SD	Decision
1	Interest of teenagers in foods that are in vogue	3.47	0.562	Agreed
2	Parents financial capability	3.43	0.534	Agreed
3	Parents policies determines teenagers eating pattern	3.41	0.599	Agreed
4	Peer pressure	3.38	0.646	Agreed
5	Time for taking each meal in the home	3.51	0.527	Agreed
6	The cultural belief of teenager's family	3.38	0.595	Agreed
7	Parents' or Caregivers' knowledge of nutritional education	3.40	0.599	Agreed
8	Availability of the food in the locality	3.38	0.615	Agreed

Key: N – total number of respondents, C - cut-off point, \bar{x} – mean response of all respondents, SD – Standard deviation

Table 4 revealed that the means of responses of all items range from 3.38 – 3.51. This indicates that the respondents agreed with all the items statements as part of the factors responsible for the eating patterns of teenagers in secondary schools because their mean were above the cut-off point of 2.50. The standard deviation of the responses ranges from 0.534 to 0.646 and was relatively low. This indicates that the responses were clustered around the mean.

3.4. *Null Hypothesis One:* There is no significant difference between the eating pattern of teenagers in public and teenagers in private schools.

Table 5: T-test statistics on the mean responses of the eating pattern of teenagers in public and teenagers in private schools

	schools	N	\bar{x}	SD	Std. Error	Df	F	Sig.
Eating Pattern Of Teenagers	Public	140	1.3443	.51268	.06564	218	.003	0.087
	Private	80	1.4615	.55470	.08882			

Level of Significance ≥ 0.05

Key: N – total number of respondents, \bar{x} – mean, SD – Standard deviation, *Std. Error* – standard error, *df* – Degree of freedom, *f* – Sig – Significance level

The p-value obtained from the table 3 using the responses gotten from the questionnaire is 0.087. Since the p-value is higher than the alpha value (0.05), the null hypothesis that there is no significant difference between the eating pattern of teenagers in public and teenagers in private schools is

accepted. This implies that the teenagers in private and public schools have the same eating patterns.

3.5. Null Hypothesis Two: There is no significant difference between the eating pattern of male and female teenagers.

Table 6: T-test statistics on the mean responses of the eating pattern of male and female teenagers.

	Gender	N	\bar{x}	SD	Std. Error	df	F	Sig.
Eating Pattern Of Teenagers	Male	54	1.2333	.45668	.08654	198	.002	0.017
	Female	166	1.5665	.53220	.07652			

Level of Significance ≥ 0.05

Key: N – total number of respondents, \bar{x} – mean, SD – Standard deviation, Std. Error – standard error, df – Degree of freedom, f – Significance level

The p-value obtained from the table 4 using the responses gotten from the questionnaire is 0.017. Since the p-value is lower than the alpha value (0.05), the null hypothesis that there is no significant difference between the eating pattern of male and female teenagers is rejected. This implies that the eating pattern of female and male teenagers is different.

Findings from the study showed that the eating patterns of teenagers in secondary schools revealed that teenagers consumed a lot of soft drinks and snacks and less of fruits, which simply implies that the eating pattern of teenagers are unhealthy. This is in line with the report of Hallström et al. (2012) that contended disordered eating pattern, such as skipping breakfast, low intake of fruits and vegetables, and high intake of fast foods, have equally been noted in Europe. The study revealed that the difference between the eating pattern of teenagers in public and teenagers in private schools in Ondo West Local Government Area was significant ($p = 0.087$). This implies that the teenagers in private and public schools have the same eating patterns.

The study revealed that the difference between the eating pattern of male and female teenagers in Ondo West Local Government Area was not significant ($p = 0.017$). This thus implies that the eating pattern of female and male teenagers is different. This finding concur with the report of Levi, Chan and Pence (2006) in their study on college students showed that males are less likely to pay attention to food labels and are less interested in their food decisions compared to their female counterpart. Male students are less likely to think about food and eating, while female students view it as a constant process.

The study revealed that teenagers understand the need for healthy eating patterns. This simply implies that level of awareness of healthy eating pattern of teenagers in secondary schools is relatively high. However, the level of awareness does not affect their eating patterns, as many teenagers involve in unhealthy eating patterns. These findings supported by Kendel, (2011) whom indicated that there were no significant relationships, between nutrition knowledge and dietary practices of medical students though correlations. Often a person has factual (declarative) knowledge but does not have procedural knowledge (i.e., knowledge to put facts into action). For example, at a basic level, a person may know that vitamin C is an important vitamin, but he or she may not know what foods provide vitamin C, or how to cook these foods to maximize retention of the vitamin (Barbosa et al., 2016).

The study further revealed that teenagers understand the effects of healthy eating patterns have on their health. Effects such as; high rate of sugar consumption which leads to diabetes, regular

intake of fruits and vegetables which prevents old age diseases, consumption of sweetened food such as sweet which causes decay of the teeth and consumption of excess calories and fat which leads to obesity. In line with this finding, Vohs, Heatherton and Herrin (2001) contended that some of the physical consequences may include: malnutrition, dehydration, severe organ damage (heart, kidney, and/or liver), tooth or gum erosion, esophageal tears and ruptured stomach.

The study also showed that the factors responsible for the eating patterns of teenagers are; interest of teenagers in foods that are in vogue, parents financial capability, parents policies determines teenagers eating pattern, peer pressure, time for taking each meal in the home the cultural belief of teenager's family, parents' or Caregivers' knowledge of nutritional education and availability of the food in the locality. In support of this finding, Hoerr, Bokram, Lugo, Bivins and Keast (2002) opined that peer groups is another factor that can have an influence on college students' eating attitudes and behaviors. Within the college community there are subgroups of students sometimes at greater risk of developing or continuing eating-related problems, such as those in sororities or in collegiate athletics. Those in sororities report greater use of diet pills, elimination of high fat foods and weight concerns interfering with social relationships.

The study is limited to investigating teenagers' awareness of healthy eating patterns as a precursor to healthy adulthood. Specifically the study documented the eating pattern of teenagers, highlighted the level of awareness on healthy eating pattern of teenagers, examined the level of awareness of the effect of teenagers eating pattern on their adulthood and identified the factors responsible for the eating patterns of teenagers in secondary schools in Ondo West Local Government Area.

The implications are as follows. The study has shown that teenagers consumes lot of soft drink and snacks (junks) and less fruits, which implies that the eating pattern of teenagers are unhealthy, this is in line with the findings of Hallstom et al., 2012 who contended disordered eating pattern, such as junk consumption among the youth in Europe. The study reveals that there is difference between the eating pattern of female and male teenager. This concur with the report of Levi et al., (2006) in their study on college student which shows that males are less likely to pay attention to food details compared to their female counterpart. The findings of the study equally indicate that teenagers are aware of the need for healthy eating pattern though this does not however reflect positively in the eating pattern as many of them eats junk foods. This is supported by the findings of Kendel, (2011) in which he reported that there were no significant relations between nutritional knowledge and dietary practices of medical students though correlation were for nutrition knowledge and demographic data such as age, gender and educational knowledge. Furthermore, the study establishes that teenagers understand the effects of unhealthy eating on their health such as high consumption of sugar results in diabetes, regular intake of fruits and vegetables prevent old age diseases, tooth decay as a result of sweetened food and sweet consumption, excessive calorie consumption leading to obesity. The align with the finding of Vohs et al., (2001) who reported on the consequences of unhealthy eating such as malnutrition, tooth or gum erosion, organ damage among others. The result of this research study shows that factors responsible for the teenagers eating pattern include, interest of teenagers in food fads, parent financial capability, parent policies, peer pressure, cultural belief among others. This is supported by Hoerr et al., (2002) who opined that peer groups is one the factors influencing students' eating attitudes and behaviours. Further study should be carried out in other parts of the country. Studies should be carried out on the influence of

teenagers' upbringing on their awareness of healthy eating pattern.

4. Conclusion

The study concluded that the eating patterns of teenagers are unhealthy although the level of awareness of healthy eating pattern of teenagers in secondary schools is relatively high. The level of awareness does not influence their eating patterns, as many teenagers are involved in unhealthy eating patterns despite been aware of their implications. This study also concluded that the teenagers in private and public schools have the same eating patterns, and that the eating patterns of female and male teenagers are different. The following recommendations are put forward based on the conclusion of this study: Government should inaugurate feeding programmes for students in secondary schools. Teenagers despite their awareness should eat healthier instead of going for fast foods for example snacks and soft drinks. Teenagers are advised to eat more of fresh foods that comes in natural form e.g. fruits, vegetables etc. Teachers should ensure they teach students the effect of unhealthy eating pattern during teenage hood and adulthood. Parents should pay more attention to teenagers' eating patterns by ensuring that they consume nutritionally balanced meals.

Page | 158

Acknowledgments

We hereby express our profound gratitude to our data analyst, Mr Popoola of University of Medical Science, Ondo and our research assistants, Miss Fadahunsi and Mr Olabode both of Home Economics Department, Adeyemi College of Education, Ondo, Ondo State, Nigeria for their immense contribution to the successful completion of this research.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Miss Racheal F. Gbadebo carried out the research; Dr. Monsurat Bello wrote the article while Dr. Cecilia A. Olarewaju is the research supervisor and proofreader. All authors approved the final draft for publication.

Data availability Statement

The original contributions presented in the study are included in the article. Further inquiries can be directed to the corresponding author.

References

- Aksoydan E., & Çakir, N.(2011). Evaluation of nutritional behavior, physical activity level and body mass index of young adults. *Gulhane Medical Journal*, 357, 264-270.
- Aktaş, N., & Özdoğan, Y.(2016). A study of the state of knowing the nutritional literacy concept in Turkey. *Researchers World*, 7, 46-52. DOI: 10.18843/RWJASC/V712/04.
- Barbosa, L.B., Vasconcelos, S.M.L., Correia, O.L., & Ferreira, R.C. (2016). Nutrition knowledge assessment studies in adults: A systematic review. *Cien Saude Colet*, 21, 449-462. DOI: 10.1590/1413-81232015212.20182014.
- Bohara, S.S., Thapa, K., Bhatt, L.D., Dhami, S.S., & Wagle, S. (2021). Determinants of junk food

- Consumption among adolescents in Pokhara valley, Nepal. *Frontiers In Nutrition*, 8, 644650. DOI: 10.3389/fnut.2021.644650.
- Braun, M., & Brown, B.B. (2011). Nutrition in adolescence. In: Brown, B.B., & Prinstein, M.J., (ed.). *Encyclopedia of Adolescence* (pp. 251-59). Boston: Academic Press.
- Dapi, L.N., Hörnell, A., Janlert, U., Stenlund, H., & Larsson, C. (2011). Energy and nutrient intakes in relation to sex and socio-economic status among school adolescents in urban Cameroon, Africa. *Public Health Nutrition*, 14, 904-913. DOI: 10.1017/S1368980010003150.
- Federal Ministry of Health (2007). *National Code of Health Research Ethics*. National Health Research Ethics Committee of Nigeria (NHREC).
- Food Standards Agency [FSA] (2004). *Evaluation of food and nutrition competencies amongst 14–16 year olds*. London: FSA.
- Gibney, M., Lanham-New, S., Cassidy, A. & Vorster, H. (2009). Introduction to human nutrition, (2nd Ed), Wiley-Blackwell, San Francisco. A model from a developing country. *Health Promotion International*, 24, 130-139.
- Gregory, S., Lawton, J., Wills, W.J. & Backetty-Milburn, K. (2006). Young teenager's perception of their and others bodies: A qualitative study of obese, overweight and 'normal' weight young people in Scotland. *Journal of Social Science and Medicine*, DOI: 10.1016/j.socscimed.2005.06.014.
- Hallström, L., Vereecken, C. A., Labayen, I., Ruiz, J. R., Le Donne, C., Garcia, M. C., & Sjöström, M. (2012). Breakfast pattern among European adolescents and their association with sociodemographic factors: The HELENA (Healthy Lifestyle in Europe by Nutrition in Adolescence) Study. *Public Health Nutrition*, 15, 1879-1889. Doi: 10.1017/S1368980012000341.
- Hill, A. J., Oliver, S., & Rogers, P. J. (1992). Eating in the adult world: The rise of dieting in childhood and adolescence. *British Journal of Clinical Psychology*, 31, 95–105. DOI: 10.1111/J.2044-8260.1992.TB00973.X
- Hoerr, S. L., Bokram, R., Lugo, B., Bivins, T., & Keast, D. R. (2002). Risk for disordered eating relates to both gender and ethnicity for college students. *Journal of the American College of Nutrition*, 21, 307-314. DOI: 10.1080/07315724.2002.10719228.
- Kendel, N., Jovanović, G., Krešić, G., Pavičić-Žeželj, S., Mićović, V., & Štefanac, N. V. (2011). Cancer and cardiovascular diseases nutrition knowledge and dietary intake of medical students. *Collegium Antropologicum*, 35, 765-774. DOI: 10.2186/medflum 2021_264896.
- Levi, A., Chan, K. K., & Pence, D. (2006). Real men do not read labels: The effects of masculinity and involvement on college students' food decisions. *Journal of American College Health*, 55, 91-98. DOI: 10.3200/JACH.55.2.91-98.
- Malloy-Weir, L., & Cooper, M. (2017). Health literacy, literacy, numeracy and nutrition label understanding and use: a scoping review of the literature. *Journal of Human Nutrition & Dietetics*, 30, 309- 325. DOI: 10.1111/jhn.12428. Epub 2016 Oct 12.
- Mwaruwa, S.M. (2016). Role of nutrition in health promotion and chronic disease prevention. *Journal of Nutrition & Food Science*, 6, 1-2. DOI: 10.4172/2155-9600.CI.035.
- National Population Commission (2006). Population Census of Nigeria. Abuja: NPC
- Nelson, M.C., Story, M., Larson, N.I., Neumark-Sztainer, D., & Lytle, L.A. (2008). Emerging adulthood and college-aged youth: an overlooked age for weight-related behavior change.

- Obesity (Silver Spring)*, 16, 2205-11. DOI: 10.1038/oby.2008.365.
- Rah, J.H., Chalasani, S., Oddo, V.M., & Sethi, V. (2017). Adolescent Health and Nutrition. In: de Pee, Taren D., & Bloem M. (eds), *Nutrition and Health in a Developing World*. Cham: Humana Press.
- Rathi, N., Riddell, L. & Worsley, A. (2017). Food consumption patterns of adolescents aged 14–16 years in Kolkata, India. *Nutrition Journal*, 16, 50. DOI: 10.1186/s12937-017-0272-3
- Stevens, C., Dohertya, G., Barnettb, J., Muldoona, O.T. , & Trewa, K. (2007). Adolescents' views of food and eating: Identifying barriers to healthy eating. *Journal of Adolescence*, 30, 417–434. DOI: 10.1016/j.adolescence.2006.04.005
- Tunsi, A. (2019). Exploration of the factors that influence the adoption of healthy lifestyles among Saudis living cardiovascular Disease (CVD). (Doctoral Thesis, University of Edinburgh).
- Türkmen, A.S., Kalkan, I., & Filiz, E. (2017). Adaptation of adolescent nutrition literacy scale into Turkish: a validity and reliability study. *Journal of Nutrition Research*, 10, 1-16.
- Vohs, K. D., Heatherton, T. F., & Herrin, M. (2001). Disordered eating and the transition to college: a prospective study. *The International Journal of Eating Disorders*, 29, 280–288. DOI: 10.1002/eat.1019
- Zoellner, J., Connell, C., Bounds, W., Crook L. & Yadrick K. (2009). Nutrition literacy status and preferred nutrition communication channels among adults in the lower Mississippi Delta. *Preventing Chronic Disease*, 6, A128.

Publisher: Department of Home Economics and Hospitality Management Education, University of Nigeria, Nsukka 41001, Nigeria

©2022 the Author(s), licensee Department of Home Economics and Hospitality Management Education, University of Nigeria, Nsukka, Nigeria. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>)